

REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1-12 will be pending. By this amendment, claims 1, 5-7, and 9-10 have been amended; and claims 11 and 12 have been added. No new matter has been added.

Objections to Claims 6 and 10

In Section 1 of the Office Action of November 4, 2005 ("the Office Action"), claims 6 and 10 stand objected to for informalities. Claims 6 and 10 have been appropriately amended.

§103 Rejection of Claims 1, 5-7, and 9-10

In Section 2 of the Office Action, claims 1, 5-7, and 9-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Oguro (U.S. Patent No. 6,026,212) in view of Yamada *et al.* (U.S. Patent No. 6,115,537; hereinafter referred to as "Yamada").

In the Background section of the Specification, it was disclosed that "[t]o record high-quality video data (hereinafter called high-definition (HD) video data), for example, a bit rate of about 25 Mbps is required. In a conventional recording method, the video rate corresponding to an MP@HL Moving Picture Expert Group (MPEG) method is at most about 24 Mbps except for the rate of search-image data. As a result, standard-quality video data (hereinafter called standard-definition (SD) video data) can be recorded, but it is impossible to compress and record HD video data by the MP@HL or an MP@H-14 method. ... In addition, HD video data compressed by the MP@HL or MP@H-14 method cannot be efficiently tied to that compressed

by the MP@HL or MP@H-14 method.” *Specification, page 1, line 19 to page 2, line 15.*

Further, “[c]onventionally, since an HD video signal and an HD audio signal formed by the MP@HL or MP@H-14 method are recorded in the same data arrangement as that of MPEG data as shown in FIG. 16(A), in other words, since an audio signal and the corresponding video signal are alternately arranged and recorded, when they are tied to other MPEG data, a wasteful video signal is included.” *Specification, page 24, line 25 to page 25, line 6.*

To address the above-stated problem, embodiments of the present invention provide methods and systems for collectively arranging predetermined unit of pictures and corresponding audio data, and continuously arranging a track without any space disposed therebetween. See *Specification, page 38, lines 1-13.*

For example, apparatus claim 1, as presented herein, recites:

A magnetic-tape recording apparatus for recording digital data on a magnetic tape by a rotating head, comprising:

first obtaining means for obtaining predetermined-unit video data, which includes a predetermined unit of pictures;

second obtaining means for obtaining audio data corresponding to the predetermined-unit video data;

synthesizing means for recording the predetermined unit of pictures and the corresponding audio data as one group on the magnetic tape such that they are continuous on a track in the magnetic tape without any space disposed therebetween,

wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded on a common main sector in a track, said track including an error correction code, said common main sector including an SB header and main data, said main data including at least said predetermined unit of pictures and said corresponding audio data, and said SB header including identification information for identifying a type of said main data, and

wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded in a predetermined number of tracks interleaved in said error correction code; and

sending means for sending data synthesized by the synthesizing means to the rotating head in order to record the data on the magnetic tape.

(emphasis added)

Accordingly, in one aspect of claim 1, a magnetic tape recording apparatus includes synthesizing means for recording the predetermined unit of pictures and the corresponding audio data as one group on the magnetic tape such that they are continuous on a track in the magnetic tape without any space disposed therebetween, wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded on a common main sector in a track, said track including an error correction code, said common main sector including an SB header and main data, said main data including at least said predetermined unit of pictures and said corresponding audio data, and said SB header including identification information for identifying a type of said main data, and wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded in a predetermined number of tracks interleaved in said error correction code.

By contrast, Oguro fails to teach or suggest providing synthesizing means for recording the predetermined unit of pictures and the corresponding audio data as one group on the magnetic tape such that they are continuous on a track in the magnetic tape without any space disposed therebetween, wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded on a common main sector in a track, said track including an error correction code, said common main sector including an SB header and main data, said main data including at least said predetermined unit of pictures and said corresponding audio data, and

said SB header including identification information for identifying a type of said main data, and wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded in a predetermined number of tracks interleaved in said error correction code.

Further, Yamada also fails to teach or suggest providing synthesizing means for recording the predetermined unit of pictures and the corresponding audio data as one group on the magnetic tape such that they are continuous on a track in the magnetic tape without any space disposed therebetween, wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded on a common main sector in a track, said track including an error correction code, said common main sector including an SB header and main data, said main data including at least said predetermined unit of pictures and said corresponding audio data, and said SB header including identification information for identifying a type of said main data, and wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded in a predetermined number of tracks interleaved in said error correction code.

Therefore, Oguro and Yamada, individually or in combination, fail to teach or suggest all the limitations of claim 1. 1, 5-7, and 9-10

Based on the foregoing discussion, claim 1 should be allowable over Oguro and Yamada. Further, since independent claims 5-7 and 9-10 closely parallel, and recite substantially similar limitations as recited in, claim 1, claims 5-7 and 9-10 should also be allowable over Oguro and Yamada.

Accordingly, it is submitted that the rejection of claims 1, 5-7 and 9-10 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 1, 4-7, and 9-10

In Section 3 of the Office Action, claims 1, 4-7, and 9-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ohkuma *et al.* (U.S. Patent No. 5,574,570; hereinafter referred to as “Ohkuma”) in view of Yamada.

Similar to the discussion above with respect to Oguro, Ohkuma fails to teach or suggest providing synthesizing means for recording the predetermined unit of pictures and the corresponding audio data as one group on the magnetic tape such that they are continuous on a track in the magnetic tape without any space disposed therebetween, wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded on a common main sector in a track, said track including an error correction code, said common main sector including an SB header and main data, said main data including at least said predetermined unit of pictures and said corresponding audio data, and said SB header including identification information for identifying a type of said main data, and wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded in a predetermined number of tracks interleaved in said error correction code. Therefore, Ohkuma and Yamada, individually or in combination, fail to teach or suggest all the limitations of claim 1.

Based on the foregoing discussion, claim 1 should be allowable over Ohkuma and Yamada. Further, since independent claims 5-7 and 9-10 closely parallel, and recite substantially similar limitations as recited in, claim 1, claims 5-7 and 9-10 should also be allowable over Ohkuma and Yamada. Further, since claim 4 depends from claim 1, claim 4 should also be allowable over Ohkuma and Yamada.

Accordingly, it is submitted that the rejection of claims 1, 4-7, and 9-10 based upon 35

U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 2 and 3

In Section 4 of the Office Action, claims 2 and 3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ohkuma in view of Yamada and further in view of Lee (U.S. Patent No. 5,940,016).

Based on the foregoing discussion regarding claim 1, and since claims 2 and 3 depend from claim 1, claims 2 and 3 should also be allowable over Ohkuma and Yamada. Further, Lee was merely cited for teaching a high quality video signal is a GOP having M pictures. Therefore, Ohkuma, Yamada, and Lee, individually or in combination, fail to teach or suggest all the limitations of claims 2 and 3.

Accordingly, it is submitted that the rejection of claims 2 and 3 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 8

In Section 5 of the Office Action, claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ohkuma in view of Yamada and further in view of Lee (U.S. Patent No. 5,940,016).

Based on the foregoing discussion regarding claim 7, and since claim 8 depends from claim 7, claim 8 should also be allowable over Ohkuma, Yamada, and Lee. Therefore, Ohkuma, Yamada, and Lee, individually or in combination, fail to teach or suggest all the limitations of

claim 8.

Accordingly, it is submitted that the rejection of claim 8 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 1 and 5-6

In Section 6 of the Office Action, claims 1 and 5-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Senshu *et al.* (U.S. Patent No. 6,658,195; hereinafter referred to as “Senshu”) in view of Yamada.

Similar to the discussion above with respect to Oguro, Senshu fails to teach or suggest providing synthesizing means for recording the predetermined unit of pictures and the corresponding audio data as one group on the magnetic tape such that they are continuous on a track in the magnetic tape without any space disposed therebetween, wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded on a common main sector in a track, said track including an error correction code, said common main sector including an SB header and main data, said main data including at least said predetermined unit of pictures and said corresponding audio data, and said SB header including identification information for identifying a type of said main data, and wherein said one group of the predetermined unit of pictures and said corresponding audio data is recorded in a predetermined number of tracks interleaved in said error correction code. Therefore, Senshu and Yamada, individually or in combination, fail to teach or suggest all the limitations of claim 1.

Based on the foregoing discussion, claim 1 should be allowable over Senshu and Yamada. Further, since independent claims 5-6 closely parallel, and recite substantially similar limitations as recited in, claim 1, claims 5-6 should also be allowable over Senshu and Yamada.

Accordingly, it is submitted that the rejection of claims 1 and 5-6 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

New Claims 11 and 12

Based on the foregoing discussion regarding claim 1, and since claims 11 and 12 depend from claim 1, newly-added claims 11 and 12 should be allowable over the cited prior art references.

Conclusion

In view of the foregoing, entry of this amendment and the allowance of this application with claims 1-12 are respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

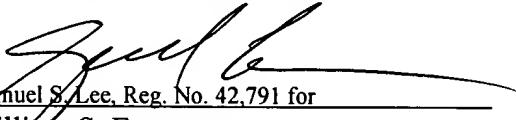
In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

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